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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,397	05/09/2001	Gary D. Tindle	99RSS178	5493

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STEVENS LAW GROUP
P.O. BOX 1667
SAN JOSE, CA 95109

EXAMINER	
NGUYEN, THANH T	
ART UNIT	PAPER NUMBER
2813	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/852,397	TINDLE ET AL.	
	Examiner	Art Unit	
	Thanh T. Nguyen	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,6,9-12,14,15 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,9-12,14,15 and 18-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of specie I in the reply filed on 2/11/05 is acknowledged.

Claim Rejections - 35 USC § 112

Claim 19 recites the limitation "the base insulating substrate" in 4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change to "a base insulating substrate"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-6, 9-11, 14-15, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Knapp et al. (U.S. Patent No. 5,973,337).

Referring to figures 1-4, Knapp et al teaches a package for an imager integrated circuit chip, the imager integrated circuit chip having a bond pad for communicating an electrical signal to or from the imager integrated circuit chip, the package comprising;

a printed circuit board (11)comprising at least one bond lead and at least one package lead (21) electrically coupled to the bond lead (14, figure 1, col.2 , lines 1-67);

the imager integrated circuit chip (24) disposed on the printed circuit board (11, col. 3, lines 1-4);

the bond pad (26) coupled to the at least one bond lead (14), allowing communication of the electrical signal between the at least one package lead (21) and the imager integrated circuit chip (24); and

an optical cover (29) disposed on the printed circuit board, that, with the printed circuit board (11) encapsulates the imager integrated circuit chip (24, figure 1, and col. 3, lines 20-29).

Regarding to claims 2, 11, the printed circuit board further comprising: a retaining structure (22) disposed on the printed circuit board (11) around the imager integrated circuit chip, the retaining structure and the printed circuit board forming a recess in which the imager integrated circuit chip (24) is mated to the printed circuit board (11); and

the optical cover (29) comprising a filler material deposited in the recess (see figure 1, col. 3, lines 20-29.

Regarding to claim 3, 10, 18, the filler material cures within the recess to form a hardened protective coating over the imager integrated circuit chip. Noted that the limitation

"Cure" is method recitations in a device claimed, and they are non-limiting, because only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Regarding to claim 5, 14, the at least one package lead (21) is arranged on a periphery of the printed circuit board (see figure 1).

Regarding to claim 6, 15, the at least one package lead comprises a plurality of package leads (21) arranged in an array (see figures 1).

Regarding to claim 9, the electrical signal is routed to reduce capacitive or inductive interference (11, see figure 1).

Regarding to claim 10, the insulating substrate (see col. 2, lines 4-7).

Regarding to claims 12, 20, the optical material has a light transmission characteristic (29, see col. 3, lines 20-30).

Regarding to claim 19, the containment structure (22, see figure 1).

Claims 1-3, 5-6, 9-11, 14-15, 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukamura et al. (U.S. Patent No. 6,627,872).

Referring to figures 20a-20b, Fukamura et al. teaches a package for an imager integrated circuit chip, the imager integrated circuit chip having a bond pad for communicating an electrical signal to or from the imager integrated circuit chip, the package comprising;

a printed circuit board (117)comprising at least one bond lead (horizontal end of 113) and at least one package lead (vertical portion of 113) electrically coupled to the bond lead (col. 1, lines 35-59, figure 20a-20b);

the imager integrated circuit chip (111) disposed on the printed circuit board (117, col. 1, lines 60-65);

the bond pad (internal terminal) coupled to (via bonding wire 114) the at least one bond lead (113), allowing communication of the electrical signal between the at least one package lead (113) and the imager integrated circuit chip (111, figure 20a-20b); and

an optical cover (space between 117 and 116) disposed on the printed circuit board (117), that, with the printed circuit board (117) encapsulates the imager integrated circuit chip (111, figure 20b, col. 1, lines 45-52).

Regarding to claims 2, 11, the printed circuit board further comprising: a retaining structure (115) disposed on the printed circuit board (117) around the imager integrated circuit chip, the retaining structure and the printed circuit board forming a recess in which the imager integrated circuit chip (111) is mated to the printed circuit board (117); and

the optical cover comprising a filler material (filled between 117 and 116) deposited in the recess (see figure 20b, col. 1, lines 45-52).

Regarding to claim 3, the filler material cures within the recess to form a hardened protective coating over the imager integrated circuit chip. Noted that the limitation "Cure" is method recitations in a device claimed, and they are non-limiting, because only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product

produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Regarding to claim 5, 14, the at least one package lead (113) is arranged on a periphery of the printed circuit board (see figure 20a).

Regarding to claim 6, 15, the at least one package lead comprises a plurality of package leads (113) arranged in an array (see figures 20a).

Regarding to claim 9, the electrical signal is routed to reduce capacitive or inductive interference (117, see figure 20a-20b).

Regarding to claim 10, the insulating substrate (1, see col. 9, lines 11-40).

Regarding to claims 12, 20, the optical material has a light transmission characteristic (see figure 20a- 20b, material between 117 and 116).

Regarding to claim 19, the containment structure (115, see figure 20a-20b).

Claims 10-11, 14-15, 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukamura et al. (U.S. Patent No. 6,627,872).

Referring to figures 3a-3b, Fukamura et al. teaches a chip carrier package for an imager integrated circuit chip, the imager integrated circuit chip having a plurality of electrical pads, the package comprising:

a preformed package base comprising:

an insulating substrate (1, col. 9, lines 11-40, figures 3a-3b);

a plurality of bond leads (4) disposed on the insulating substrate(1), and

a plurality of package leads (3) electrically coupled to the plurality of bond leads (4); and

the imager integrated circuit chip (2) disposed on the preformed package base (1); and

an optical material (7) disposed on the imager integrated circuit chip that cures to form a hardened protective coating over the imager integrated circuit chip (see col. 6, lines 63-67, col. 7, lines 5-37, col. 8, lines 27-31). Noted that the filler material cures within the recess to form a hardened protective coating over the imager integrated circuit chip. Noted that the limitation "Cure" is method recitations in a device claimed, and they are non-limiting, because only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Regarding to claim 11, a retaining structure (6b) surrounding the imager integrated circuit chip (see figure 3a), the retaining structure (6b) and the preformed package base forming a recess in which the imager integrated circuit chip (2) is disposed on the preformed package base; and the optical material being deposited in the recess before it has cured.

Regarding to claim 12, 20 the optical material has light transmission characteristics (7, see figure 3b).

Regarding to claim 14, at least one of the plurality of package lead is arranged on a periphery of the preformed package base (see figures 3a-3b).

Regarding to claim 15, the preformed package base supports the plurality of package leads in an array(see figures 3a-3b).

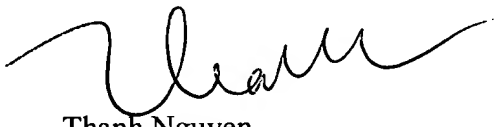
Regarding to claim 19, the containment structure (6b, see figure 3b).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (571) 272-1695, or by Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached on (571) 272-1702. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (**See MPEP 203.08**).



Thanh Nguyen
Patent Examiner
Patent Examining Group 2800

TTN